

USING TECHNICAL DATA AND MARKETING RESEARCH TO CHANGE BEHAVIOR

Stephen Groner
S. Groner Associates, Inc.
Long Beach, CA

Abstract

The City of Los Angeles is faced with the task of educating over three million residents regarding the various pollutants effecting water quality. With limited resources, the City is challenged with effectively reaching and influencing the greatest number of residents who have the greatest impact on improving water quality.

To develop this program, S. Groner Associates, Inc. (SGA) was hired by the City to develop and implement a strategic social marketing plan based on technical data and marketing research. The goal of the plan was to target audiences who have the greatest impact on water quality. With those key groups in mind, outreach efforts were developed based on the specific audiences' attitudes, styles, and behaviors. This would focus resources most cost effectively on efforts with the greatest chance to influence behavior change and thus prevent pollution.

In developing the plan, we used technical data analysis and existing market research information to determine the following:

- ◆ activities posing the greatest threat to water quality
- ◆ activities/behaviors most influenced by public education
- ◆ audiences engaged in those activities
- ◆ psychographics of the audience (i.e., attitudes, characteristics and styles of the audiences)
- ◆ methods to reach our audiences to increase the influence of the outreach

These key points served as the foundation for developing outreach efforts as well as the emphasis, style, and tone of our communication pieces.

This presentation reviews the role of market research and data analysis in developing a social marketing plan, in addition to designing marketing materials and implementing the outreach efforts. We will also illustrate how incorporating new marketing data helped gage the outreach's successes and areas for further refinement.

Building a Foundation for the Marketing Plan

Effective outreach requires developing a solid information base about behaviors you want to change. The information ascertained assists in determining how and who to target in order to maximize the impact on improved water quality.

This information is highly effective when developing a social marketing plan for stormwater pollution. Building the marketing plan's foundation, however, is still very difficult because of the complexity of stormwater. By its very definition, stormwater pollution or non-point pollution is not one single source, but a complex collection of problems to target. In turn, developing a marketing plan for stormwater pollution is

not just about developing one plan to address one issue. It requires a multi-pronged campaign that attacks the various causes of stormwater pollution. The plan must be composed of several focused marketing strategy's each addressing the most problematic pollutants/behaviors.

Because of the issue's complexity, understanding the limits of your resources and strategically focusing your outreach to maximize impact is essential. In determining our outreach, we used both technical data and existing market research information to strategically lay out our direction for public education. This process included the following steps:

- Determine the pollutants/activities posing the greatest threat to water quality
- Determine what corresponding activities/behavior are best influenced through public education
- Identify the audiences engaged in those activities/behaviors
- Understand the psychographics of the audiences (i.e., attitudes, characteristics and styles of the audiences)
- Understand the motivators that will best influence our audiences

Any effective marketing plan or outreach effort must be designed with an intimate understanding of the audience that you are targeting. Many times, there is a misconception that because the issue is important people will automatically listen to it. But the message is competing for attention with thousands of other messages that bombard residents everyday; everything from ads selling cars and beer, to other social marketing ads like recycling campaigns, anti-smoking campaigns, or drug prevention campaigns. In the end, if the outreach piece is generic and does not in some way connect with a specific audience and compel them to listen, they won't.

This paper lays out the methodology used to develop a solid social marketing plan and introduces the City of Los Angeles' public education program as an example of this type of strategic planning's success.

Prioritizing Pollutants

The first step in targeting outreach is determining the pollutants that pose the greatest threat to water quality. This effort requires an analysis of water quality data and reconciling this information across watersheds if the jurisdiction covers more than one watershed.

In conducting this technical research for the City of Los Angeles, we worked with GeoSyntec Consultants, Inc. to evaluate and analyze water quality data from the City and County of Los Angeles. The City of Los Angeles lies within three primary watersheds and a multitude of subwatersheds. The three primary watersheds all have broad similarities of a mostly urban environment. However, at the subwatershed level, there were vast differences in the environment.

After results were evaluated, five pollutants were selected for the campaign:

- Bacteria/Pathogens
- Pesticides
- PAH's
- Nutrients
- Trash and Debris

Prioritizing Activities to Target

Prioritizing activities requires balancing technical information about pollutants with an understanding of which pollutants are most effectively targeted through public education.

Based on this, we looked at activities that produce pollutants and prioritized which activities could most effectively be targeted. The following criteria served as a guideline for prioritization:

- How pervasive the activity is across the target area
- How active or passive is the polluting activity
- How effective behavioral BMPs are vs. structural BMPs
- How complex or simple the solutions are to implement and
- Where possible evaluate the proportion of pollution the activity contributes to the total pollutant load

Ideally, this process begins with analyzing pollutant source data. However, given the nature of stormwater/non-point source pollution, this information may not be available for most jurisdictions, so there is a need for best judgment.

In addition, the area and process of evaluation, be it individual watershed, across a jurisdiction, or across a regional area, must be determined. This issue is important for obvious environmental science reasons as well as strategic marketing reasons. For example, a pollutant or activity in one watershed may be prioritized differently if evaluated in different areas because of the watershed's maximum sustainable load. But from a marketing perspective, this determination will be critical in determining what outreach methods are most effective and available in the area to reach the target audience. For example in some areas billboard advertisements or newspaper advertisement may target the area and activity well, while in other areas an activity may be best targeted through point of purchase advertising.

Applying the above criteria helped prioritize the activities as the following:

- **Bacteria/Pathogens**
 - o *Leaks from sewer systems – low*
 - o *Improper BMPs at Restaurants – medium*
 - o *Owners picking up after their dogs – high*
 - o *Improper BMPs by horse owners – low region wide - high in certain subwatersheds*
 - o *Proper maintenance by septic system owners – low region wide - medium in certain subwatersheds*
- **Pesticides**
 - o *Residential users - high*
 - o *Commercial users - low*
 - o *Government users – medium*

- **PAH's**
 - o *Vehicle leaks – low*
 - o *Improper BMPs at auto repair shops/gas stations – medium*
 - o *Improper disposal of vehicle fluids by residents – high*
- **Nutrients**
 - o *Fertilizer application by residents – high*
 - o *Proper maintenance by septic system owners – low region wide - high in certain subwatersheds*
- **Trash/Debris**
 - o *Active littering by residents - high*
 - o *Litter from uncovered trash containers – low*
 - o *Litter from uncovered commercial vehicles - low*

Identifying Audiences

In selecting a target audience, the program's developmental focus shifts from the technical field to the marketing arena. Marketing research is key to identifying which audiences, or in marketing terms "segments of the population," are engaged in the problematic behavior. The next step is discovering common characteristics among the audience and developing a focused message that is tailored to their interest and motivations.

The best way of collecting this information is to conduct surveys of residents. The survey would incorporate questions to ascertain what types of residents are engaged in the improper behavior. Cross referencing the results with psychographic information (i.e., attitudes, behaviors, lifestyles, which "segments of the populations"), helps target how to best address the issue and change behavior.

This approach, however, can be expensive. Depending on the campaign's size, less expensive and simplified research can yield similar information. One effective method is matching up behavior with a consumer market. For example, when targeting people who improperly dispose of their oil, you can target people who buy oil and identify them as consumers at auto parts stores. While this will not narrow your audience down to only those who are illegally dumping their oil, it serves as a solid starting point for further refinement. Later, a simple intercept survey conducted at auto parts stores can help better assess the audience and hone strategies to target the audience.

Another cost-effective way to understand your audience is through the use of the US Census Bureau's Web site. The Census Bureau's site gives demographic and socio-economic information broken down by city, zip code, and census tract. The site allows you to import the data to spreadsheets or even use a Web based GIS software program to map the data. This information is extremely valuable in targeting an activity that may focus in on a specific area. One example would be targeting homeowners in a specific area. From the website, you could identify homeownership rates and then correlate that to other demographic and socio-economic information such as income levels, languages most commonly spoken, ethnic background, employment rates, etc.

Understanding Psychographics

Once the target audience is identified, the next step is understanding the "psychographics" of the audience (their attitudes, interests, and styles). This information provides insight into the audience's thoughts and is

an essential step in designing effective outreach. Without outreach efforts/messages that connect directly to a group's sensibilities, interests, or concerns, changing a habit is almost impossible.

Obtaining an audience's psychographic information is more difficult than merely identifying the audience. To gather information regarding attitudes, marketing surveys are critical. The surveys gather relevant information by correlating residents' interests and priorities with their activities and behaviors. The resulting information helps isolate key issues and motivators relevant to the audience.

Depending on survey results regarding a target audience's priorities and motivators, an issue could be positioned in various ways. For example, the issue of pesticide use could be presented with three different focuses depending on the audiences' psychographics:

- 1) as an environmental issue (chemicals impact on the watershed),
- 2) as a "dollars and cents" issue (addressing the source is cheaper than treating the problem), or
- 3) as a family/child safety issue (safety concerns of children playing on a lawn with chemicals).

Understanding the psychographics of the target audience, simplifies choosing the most meaningful and effective message.

If creating and/or performing a survey is not possible, relevant information based on a similar issues or audiences can be frequently found in marketing surveys completed by other organizations. In researching segmentation information for the City of Los Angeles, SGA based its information on three previously completed marketing research surveys that could be analyzed for information relevant to the City's demographics characteristics: two were conducted by the County of Los Angeles (one on stormwater issues and one focused on do-it-yourselfers) and one conducted by the State (on residential used oil recycling).

The resulting information gave SGA a full picture of various target audiences and helped differentiate our messages based on each particular audience. Based on the results from our marketing research and technical data, we identified and prioritized our three main target audiences:

1) Neat Neighbors -

Description - Younger families with children who want to do the right thing but needed a little coaxing

Motivators to change – Concern about children, concerned about the neighborhood, interested in doing what's good for the environment

Activities/Behaviors – Picking up after pets, pesticide and fertilizer use

2) Fix-it Foul-ups -

Description - Middle class homeowners who are do-it-yourselfers

Motivators to change – Put family first, want to follow rules, not interested in the environment

Activities/Behaviors – Pesticide and fertilizer use

3) Rubbish Rebels -

Description - Younger males who are just getting out on their own

Motivators to change – Concern with their image and peer's perception of them; following rules is not "cool"

Activities/Behaviors – Littering and used oil disposal

Strategic Outreach

The last element is determining the best outreach efforts to effectively reach the target audiences. The goal is to identify outreach efforts that strategically delivers the message and increases the message's influence on their behavior. SGA looked at three elements in evaluating the outreach strategy:

- 1) How timely is the message in relation to the activity
- 2) How well placed is the message to reach the target audience
- 3) How well delivered is the message to catch the attention of the audience

These three elements help compare potential outreach methods in terms of the ability to reach and influence the audience. The first element addresses the issue that people receive information all the time, but unless it is delivered at a relevant time, the audience may not focus their attention and note the information. A good example of this is giving out information on pet care when one gets a pet. The timing is perfect because the owner is excited about the pet and is open to learning about them. Delivering the pet message at this time also increases the likelihood of changing behavior because the owner has not developed bad habits yet.

The second element addresses the quality and focus of outreach aimed at the target audience. For example, an ad in a newspaper regarding pesticide use may reach a large number of residents but may not be strategically placed, and therefore, does not effectively reach the target audience. However, an ad placed in the weekly "Home and Gardening" section of the newspaper would be far more effective because it was strategically placed in an area relevant to the specific readers of that section.

The third element addresses how effectively the outreach method catches the audience's attention. For example, a small logo placed on a banner for an event may not be noticed next to a dozen other logos. However, a well placed booth at an event with a staff member actively approaching the target audience (as opposed to waiting for them to approach the booth) can be far more effective.

Examples of how these evaluations helped in developing strategic outreach methods to address high priority activities for the City are the following:

Picking Up After Your Pet

- **Material placement at animal shelters and inclusion with pet adoption materials**
- **Participation a pet adoption events held by animal shelters**
- **Point of purchase displays at pet stores**
- **Material placement at veterinary clinics**

In this effort, we partnered with animal shelters. This allowed us to deliver our message to residents who were planning on adopting new pets. We accomplished this by placing our information in animal shelters' adoption package- an item given to all new pet owners. To reach the same audience, we also set up a booth and distributed



information at pet adoption events. This outreach strategically accomplished three goals:

- 1) ensured our information would be received by the new pet owner,
- 2) allowed us to get our information to the owner at a point in time when they are most interested in learning about the new pet and
- 3) delivered the information to the owner before they developed bad habits regarding their pet's care.

In addition to animal shelters and pet events, pet stores and veterinary clinics were utilized as key venues for outreach. Materials were strategically placed in immediate view of our target audience at a time when they were thinking about their pet (i.e., shopping for their pet or bringing the pet in for medical attention).

Pesticide and Fertilizer Use

- Partnership with home improvement stores

- Develop point of purchase displays
- Conduct staff training to enable employees to answer questions

- Placed radio ads on a local weekend gardening show

This effort entailed partnering with the major home improvement chains (Home Depot, Lowe's, OSH) and obtaining pro bono placement of materials on the shelves where pesticide and fertilizer products are sold. This put the information in the audience's direct view at the point in time when they were deciding what product (toxic or non-toxic) to purchase. We then trained store staff on the issues concerning urban runoff and pollution prevention issues. The result gave us credible advocates for our message right on the "frontlines."

Along with that effort, we sponsored a local weekend talk show about gardening. This effort was strategic in two ways:

- 1) it was targeted directly at residents most likely to use fertilizers and pesticides and,
- 2) the program aired on the weekend, a time when residents are likely to be engage in their gardening or lawn care activities.



Used Oil Recycling

- **Partnerships with car clubs**
- **Strategic radio advertising**
- **Partnerships with auto parts stores**

In this effort, we faced the challenge of reaching an audience that did not want to be reached; younger males who didn't care about the environment or recycling their oil.



To reach this audience, we focused less on the message and more on the campaign's image as well as the person delivering the message. In reaching the audience, the messages were delivered through peers and at familiar venues. For example, booths were set up at lowrider car shows, but rather than staffing the booth ourselves, SGA teamed up with lowrider car clubs. The car clubs then brought their cars and distributed our message. This gave the campaign credibility with our audience, helped build a brand image for the campaign and made the campaign "peer to peer."

Another part of this effort was placing ads on radio stations our audience identified with. Based on the marketing research, we were able to identify the radio stations our audience listened to most. We then placed ads on their weekend program, which allowed us to air our ads around the time when do-it-yourselfers change their oil.

The last effort was to place materials in auto parts stores. SGA did this by placing floor graphics in front of the oil products shelf, posters in storefront windows, and counter cards by the cash register. This effort ensured that our message reached those buying new oil and hit them when they were focused on their vehicle.

Results/Evaluation

Determining the effectiveness of outreach is a critical element in any public education campaign. Obtaining results and feedback allows you to refine your outreach efforts and tweak your strategy to improve your efforts. However, in tackling outreach on stormwater pollution, certain targets may be extremely difficult to obtain good information on, while other activities may be straightforward. The key is to set up several feedback points. While none may be perfect, the goal is to collect enough data to determine a trend and give a sense of the program's effectiveness.

This was exactly the case in the City's campaign. In evaluating our outreach on used oil, SGA had two solid methods of obtaining feedback. The methods were 1) surveying auto parts stores regarding how much used

oil they were collecting and 2) tracking the number of calls to the environmental hotline asking for information on used oil recycling. In both cases, our numbers went up.

- 1) Used oil collection – 9% increase over the previous year
- 2) Call to the hotline – 120% increase over the previous year

In evaluating pesticide/fertilizer and pet outreach, we could only rely on indirect methods.

For outreach targeting pesticides and fertilizers, we evaluated participation at household hazardous waste collection events and conducted qualitative quizzes during employee training classes. The results from collection events showed over a 10% increase in volume collected, however the training classes showed only an adequate retention of information (based on trainer's judgment no actual data collected). The feedback on the training classes, while not positive, proved helpful. SGA concluded from the information that shorter periods between training classes are needed to address employee attrition and bring new employees up to speed on the program.

In our outreach to target pets, we focused our evaluation on surveying pet owners at adoption events. At this point, we have no clear feedback yet. Our goal is to build up a database of information regarding the habits of pet owners and then determine if habits change over time. Currently, we are still developing our baseline.

Conclusion

Overall, there are a multitude of outreach efforts that can be implemented, however, most programs have very limited resources as well as the tough challenge of trying to change someone's behavior. Many consumer marketing campaigns have huge budgets completely dedicated to marketing and advertising a simple message such as switching brands. Our challenge is marketing an issue and in sighting a behavioral change that may be inconvenient. This challenge is increased when combined with a lack of resources. Therefore, developing a smart social marketing plan is imperative to successfully implement outreach.

Additionally, developing a social marketing plan helps guide and direct a strategic public education campaign. Given the complexity of stormwater pollution, it is an invaluable tool in analyzing all the potential options/directions for the campaign. To effectively maximize limited resources, strategic planning using technical data to target the activities combined with the use of marketing research, is critical. These two pieces of information (the data and research) help ensure that the outreach is targeted at the highest priorities and that limited efforts can be as effective as possible. In the end, the more information gathered about pollution, behaviors, and your audience, the better your chances of success.